

### **ABSTRACT OF THE DISCLOSURE**

Systems, methods and computer software are provided for testing a laser. Initially, the laser is operated at a first bias setting and a data rate of about 10 Gb/s, and a first side mode suppression ratio of the laser output is measured that is based on a first ratio of a highest and next highest optical power peaks as a function of a first wavelength. Next, the laser is operated at a second bias setting and a data rate of about 10 Gb/s, and a second side mode suppression ratio of the laser output is measured that is based on a second ratio of a highest and next highest optical power peaks as a function of a second wavelength. A test result for the laser is then generated in accordance with a difference between the first and second side mode suppression ratios.